

the secretions in the sinus, which caused great pressure on the sinus wall; this pressure, acting on the back of the orbit, had paralysed the muscles (probably by pressure on the inferior division of the third nerve at or near the sphenoidal fissure.—K. R.).

Orbital and Supra-orbital Neuralgia caused by a Purulent Inflammation of the Bulla Ethmoidalis.

The neuralgia was immediately and permanently relieved when free drainage of the purulent collection was provided for.

Protrusion of the Eyeball associated with a Serous Sphenoidal Sinusitis.

The patient, a girl aged eighteen, had severe protrusion of the left eye, which was otherwise normal. With the exception of some chronic hypertrophic catarrh, nothing abnormal could be seen in the nose. The ostium of the sphenoidal sinus could not be seen, and, as in the former case, a sound was pushed through the anterior wall into the sinus. A copious discharge of blood and blood-stained fluid escaped and the protrusion of the eye became less marked at once; two days later it was quite unnoticeable.

In all these cases the author claims that the ocular symptoms were entirely dependent on a nasal lesion, as is proved by their immediate disappearance when the nasal condition had been treated.

Knowles Renshaw.

EAR.

Valentin (Berne).—*On Hæmatoma of the Right Ear in Swiss wrestlers.* "Zeit. für Ohrenheilkunde," Band li, No. 2.

The right ear is pressed forcibly against the opponent's chest during this form of struggle, and a hæmatoma is consequently frequent. Incision relieves the pain, but does not prevent the shrinking. The author therefore recommends, in recent cases, aspiration of the contents and subsequent massage. Rest and time are also desirable, but they are not readily accepted by the wrestlers.

Dundas Grant.

Henrici (Aix-la-Chapelle).—*Further Observations on Tuberculosis of the Mastoid in Childhood.* "Zeit. für Ohrenheilkunde," Band li, No. 2.

As the result of investigation of eight cases of tuberculosis of the mastoid in children, the author comes to the following conclusions:

(1) That mastoid tuberculosis in children is a comparatively frequent disease, about one fifth of all cases of mastoiditis in children being tuberculous.

(2) Tuberculous mastoiditis in children is in most cases primarily an osseal disease—that is to say, induced through the circulation.

(3) This primary osseal tuberculosis is more frequent than the secondary form which results from tuberculosis of the tympanum.

(4) This mastoid tuberculosis is in many cases purely local and comparatively benign; it is very amenable to treatment, and if operation is carried out in good time the prospects of recovery are great.

(5) In the operation it is generally possible to remove all the disease by means of simple chiselling of the bones of the mastoid; it is only in a few cases that it is necessary to clear out the tympanum as in the radical mastoid operation.

(6) Certain diagnosis of the presence of tubercle can only rarely be determined by the naked eye, but mainly by microscopical examination. Experiment on animals does not give such a certain result as the microscope.

(7) Facial paralysis is relatively rare in tuberculous mastoiditis in children, and when it is present it points to an advanced process in the bone.

(8) Tuberculosis of the pharyngeal tonsil has no marked significance in the retention of such mastoid tuberculosis. *Dundas Grant.*

Wittmaack (Greifswald).—*On the Histo-pathological Examination of the Organ of Hearing, with a Special Reference to the Administration of Fat and Myelin Substances.* "Zeit. für Ohrenheilkunde," Band li, No. 2.

The methods of staining various sections for a general view of fat medullary sheaths and nerve-cells respectively are described.

Dundas Grant.

Neumann, H. (Vienna).—*Antrotomy and Radical Operations under Local Anæsthesia.* "Zeit. für Ohrenheilkunde," Band li, No. 2.

Only those cases are suitable in which there is no sub-periosteal abscess and in patients who are not too nervous. Local anæsthesia is strongly indicated in all cases with advanced pulmonary tuberculosis, acute affections of the lungs, diabetes, nephritis, and severe uncompensated lesions—in short, in all cases where there is a contra-indication for general anæsthesia. It is recommended that the patient should take a good meal before the operation. Five injections are made, of which three are in the mastoid region and two in the groove of attachment of the auricle, so that they can reach the posterior wall of the meatus. For the radical operation, in addition to the injections above enumerated, four further ones are made into the four walls of the meatus. *Dundas Grant.*

Heine, B. (Berlin).—*Isoform in the After-Treatment of the Radical Operation.* "Zeit. für Ohrenheilkunde," Band li, No. 2.

This is found to keep the formation of granulations in check, to diminish the secretion, and more or less to prevent its conversion into pus, thereby favouring epidermisation. It must not be used in strong solution, as it would prevent the formation of granulations altogether, owing to its strong corrosive action. Heine uses ordinarily the 3 per cent. gauze. For the first dressing iodoform gauze is used, and it is only when the bone is completely, or nearly completely, covered with granulations that isoform gauze is employed in its stead. The dressing is changed daily; it may be left for two days, but not longer. Isoform is found to act as an antiseptic against the pyocyanus. It cannot take the place of iodoform altogether, and in point of fact in the after-treatment of simple chiselling of the bone in acute suppurations it is not to be used, as its tendency to restrain the formation of granulations is too great. *Dundas Grant.*

Blake, C. J. (Boston).—*Therapeutic Effect of Sound-Waves, or Mechano-Therapeutics of the Ear.* "Boston Medical and Surgical Journal," July 12, 1906.

The object of this paper is to show "that the application to the organ

of hearing of that mode of motion which it is especially constructed to transmit and to perceive comes, justifiably, under the head of mechano-therapeutics, and that this claim is demonstrably determinable, in the sound-transmitting apparatus, and inferentially determinable, in the perceptive organ." The author, further, thinks it desirable to draw a contrast between the grosser modes of motion, of frequent clinical use, and the lesser degrees of motion, obtainable through the medium of sound-waves, which are more appportionate to the delicacy of the sound-transmitting apparatus.

As a matter of fact sound-waves applied therapeutically are merely a form of acoustic message, and consequently require to be adopted in force and form.

Sound-waves as an adjunct to treatment are useful in two groups of cases: (1) conditions presenting more or less immobility of the sound-transmitting apparatus, (2) such conditions as decrease the power of perception. After discussing the treatment of secondary contraction of the tensor tympani by such means as the use at night of a cotton and wax plug (method of Politzer), Blake gives directions for the application of sound-waves. He suggests the human voice as most convenient, concentrated upon the ear through a speaking-tube, one or more feet long, and two inches in diameter. This tube should have its lumen partially closed midway by a ball of loosely rolled wool (which serves to decrease the resonance of the tube in its reinforcement of the sharp, upper partials of the voice). The tube should be applied directly to the ear, its other end nearly closed by the mouth of the speaker, who should speak in a moderate tone.

In higher grades of fixation it is better to use non-sonorous motion for major movements for mobilisation. In connection therewith Blake cites the changes in the drumhead in "boiler-makers' deafness" as an instance of Nature's efforts to safeguard a deeper seated and more vulnerable part. He also describes the effect of subjecting cases with normal hearing to sustained tones of undoubtedly high pitch.

He discusses briefly the force value of speech, and states that, in cases of extreme immobility of the sound-transmitting apparatus the daily use of the voice through the tube, beginning with monosyllabic words compounded of consonant sounds of high logographic value, has led, gradually, to the perception of the softer consonant sounds and, finally, to that of the continuous sentence.

In monaural deafness the daily use of this method of "voice massage" is recommended, and in cases of deaf-mutism with a remnant of sound-perception the similar application of the voice is beneficial.

In conclusion, the author points out that sound-waves as a form of massage can be applied commensurably proportionate to the delicacy of the sound-transmitting structures of the middle ear and labyrinth; that the prolonged use of tones of excessive amplitude and very low or very high pitch has a prejudicial effect on the perceptive apparatus; that mechanical reproductions of speech are open to the objection of accentuation of overtones; and that the natural voice, concentrated upon the ear, is the safest and best form of sound source for the phono-massage of the ear.

Macleod Yearsley.